HARVEST OF THE MONTH PRESENTS ...



# HARVEST HEROES!



MAY 2008 GRADES 9-12



This material was created and approved as an extension to the Harvest of the Month tool kit developed by the Network for a Healthy California.

LEARN MORE INSIDE!



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& TIME LOG...

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FUNDING OF THIS PROGRAM REQUIRES BOTH TYPES OF DOCUMENTATION...
THANK YOU!!!

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# EVALUATION

	• Pate:	# Students:	School:
	Teacher Name (Fi	rst & last):	Grade:
□ Top Secr □ Strawber			□ Pouble Bubble Map®: Vitamins & Minera
Please note	how much time was spe	nt on this lesson:	PON'T FORGET!
What class(	es) do you teach?		~
get easily in gest they be	ntegrated into your exis e modified to better suit	each, the Activities may or may ting curriculum. How would you your needs?	1. EVALUATION  Submit this page to Nutrition Services, Attn: Cathy Kawakami by JUNE 2NP. Call x7966 with questions.  2. TIME LOG
supplied.			one is also due JUNE 2NP.
			THANK YOU!
What chang participatin	ges in your classroom hang in this month's Harves	ve you made/will you make aft t?	er
You might di suit your ne a future ac	eds. Whatever it is, we u	hat's provided in the kits, or pe would love to know what your c	erhaps you piggy-back on some materials t reative ideas are! You might see your name



# TOP SECRET INFO.

#### WHO IS THIS HERO?

- Over 600 different varieties of strawberries exist, each a little different in taste, texture and size. They all still have the distinctive red Flesh, tiny yellow seeds covering the surface, and a small cap of green leaves.
- Over 70 varieties are produced commercially, but it's hard to say which actual variety(ies) you are eating.
- Long-stem strawberries aren't a different variety; they are extralarge strawberries with long, firm stems. They are more expensive than regular strawberries because they must be found in the strawberry field.
- Like other redcolored Fruits, strawberries help promote healthy hearts, memory Function, & a lower risk of some cancers.

#### A LITTLE HISTORY...

Strawberries have existed for 2,200 years. They grew wild in Italy in 234 B.C., where the first mention of strawberries occurred in the writings of Cato, a Roman Senator.

European explorers discovered strawberries in North America in 1588 when they landed in the area we know now as Virginia. The explorers Found tiny, sweet, deep red, wild strawberries. Early settlers in Massachusetts enjoyed eating strawberries grown by American Indians who cultivated them as early as 1643.

By the middle of the 1800s many regions of the United States were cultivating strawberries. Strawberries have been grown in California since the early 1900s.

#### WHEN ARE THEY "IN SEASON"?

One of the many joys experienced during the spring time is the sweet succulence of a fresh strawberry. Harvesting begins in Southern California in February and moves north as the season progresses. Peak season is between April and June when all of the growing districts are in full production. However, you will see strawberries available in the late summer and early fall, since a good portion of the California crop is harvested after June 1st.

Berries are one of the most perishable fruits, and cannot be stored in controlled-atmosphere chambers to delay ripening. Now is the time of year to enjoy fresh, <u>California-grown</u> strawberries!









#### **D**ID YOU ALSO KNOW

- Flavor is influenced by growing conditions (i.e., weather), stage of ripeness when harvested, and the variety. Size is not a factor in determining flavor.
- The strawberry plant has seeds on the outside skin rather than having an outer skin around the seed, as most berries do. They do not however, normally reproduce by seeds. When the Fruit is developing, the plant sends out slender growths called runners, also called clones, that look like strings. They grow on the ground and send out roots in the soil. The roots produce new plants which grow and bear Fruit.





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# TOP SECRET INFO.

#### STRAWBERRY POWERS



As if you needed any extra motivation to eat strawberries... Not only are they sweet enough to be dessert, they provide some estunnings nutritional benefits as well! (One cup is equal to about 8 large berries.)

### MTAWN C !

- Helps Fight infection, heal cuts, and prevent bruising.
- Necessary For the production of collagen, the connective tissue that supports bone, muscle and other tissues in the body.
- Serving as an antioxidant, Vitamin C may help lower risk of heart disease and cancer by protecting your cells against the effects of free radicals. Free radicals (diseasecausing cells) can damage healthy cells, playing a possible role in heart disease, cancer and other diseases.
- 1 cup of strawberries supplies students with 86 mg — over 100% of the Dietary Reference Intakes (DRIs)!

# Polate!

- Also referred to as "Folic acid," this B
  vitamin, has shown to play an important role
  in helping prevent birth defects.
- It also helps to make healthy new cells by manufacturing the DNA required for the rapid growth and turnover of cells.
- May help lower risk of heart disease and cancer.
- 1 cup of strawberries provides 35 μg (micrograms) of Folate. Children aged 4-13 years require 200-300 μg per day (12-18% of the DRI). For non-pregnant individuals 14t this amount of Folate represents 9% of the DRI since the requirement is 400 μg per day.

### PHYTOCHEMICALS!

- Pronounced "Fight-o-chemicals," these nonnutritive substances are produced by plants to help protect themselves from insects and other pests.
- The good news is these beneficial substances not only protect plants, they also protect humans. Phytochemicals may strengthen your body against diseases like cancer and heart disease!

# POTASSIUM!

- This mineral is necessary For your nerves to surge, muscles to contract, and the heart and kidneys to Function properly.
- Potassium also helps our bodies to regulate blood pressure.
- 1 cup of strawberries has a good amount of potassium - 252 mg to be exact. To put this into perspective, 1 medium banana has 467 mg, and 1 medium orange has 249 mg. The DRIs suggest children aged 4-18 consume between 3,800 and 4,700 mg per day.

# FIBER!

- Helps keep energy levels steady.
- Lends a mighty hand to your intestines to prevent constipation.
- May also lower cholesterol levels.
- 1 cup of strawberries provide about 3.5 grams of Fiber. The DRIs recommend children aged 4-18 consume 25-38 grams daily.

EXTENSIONS: 1.) Utilizing the Strawberry Powers: Tree Map® activity provided, students can help illustrate how strawberries promote wellness.

2.) Check out the enclosed Pouble Bubble Map® to learn about the differences between a vitamin and a mineral.

CHAMPIONS for CHANGE

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#### **ACTIVITY**

#### CONTENT STANDARDS

grades 9 \$10

grades 11 & 12

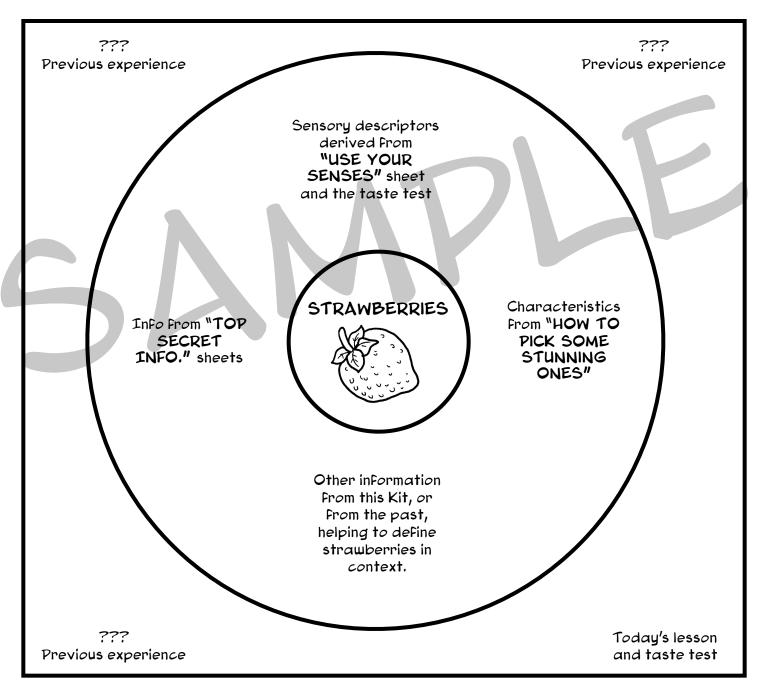
Circle Map®	Writing Strategies 1.2	• Reading Comp 2.2
Pouble Bubble Map®: Vitamins & Minerals	<ul> <li>Writing Strategies 1.2</li> <li>Literary Response &amp; Analysis 3.2</li> </ul>	• Reading Comp 2.2
Strawberry Powers: Tree Map®	• Reading Comp 2.4, 2.6, Reading 1.1	• Writing Strategies 1.3
How to Pick Some Stunning Ones + Bubble Map® Activity	・Writing Strategies 1.2 ・Literary Response & Analysis 3.2	• Reading Comp 2.2





# CIRCLE MAP®

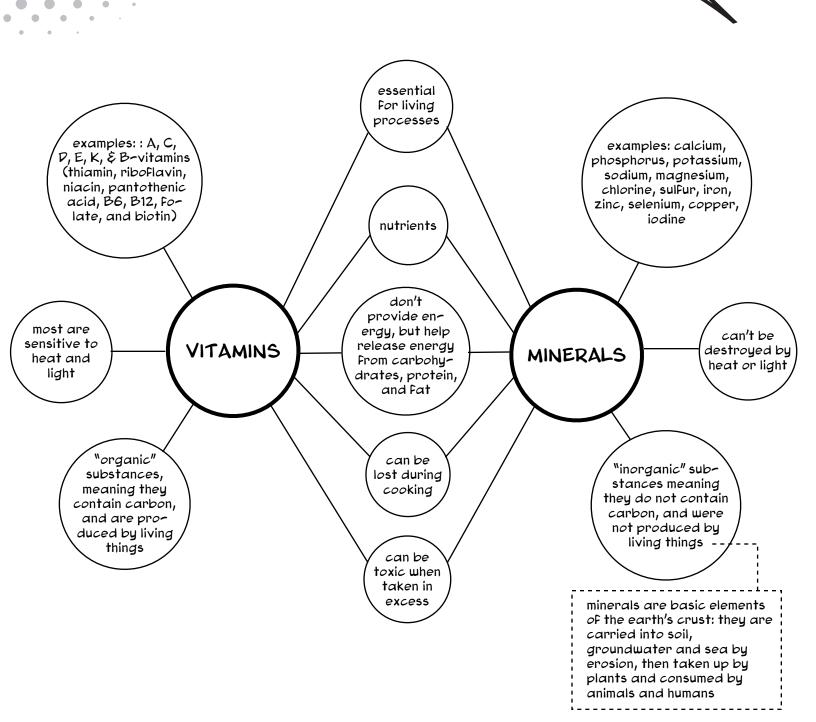
Possible ideas to include in the Formation of a Circle Map® about strawberries. The examples provided are obviously not exhaustive and are given to help illustrate and define strawberries...







# DOUBLE BUBBLE MAP®: VITAMINS & MINERALS.



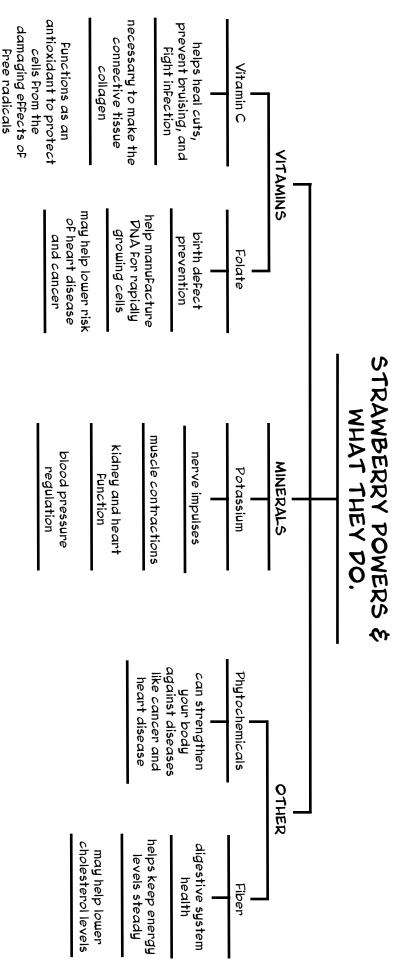








Map® based on the powers of the Stunning Strawberries. Underneath each nutritional power, students can either 1.) write what it does, or 2.) draw a picture of what it does. An illustrated example is also provided. Those trained in Thinking Maps® can use the "Stramberry Pomers" From the "Top Secret Info." sheets to help create a Tree



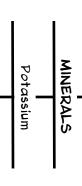








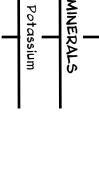


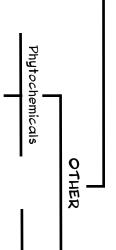


Vitamin C

Folate

VITAMINS

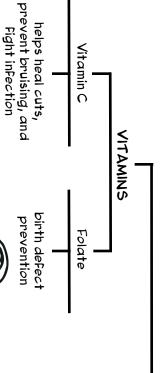




Fiber









nerve impulses

may help lower risk of heart disease

digestive system

health

and cancer

Phytochemicals

Fiber

OTHER

MINERALS

Potassium







necessary to make the

connective tissue

collagen

may help lower risk of heart disease

and cancer





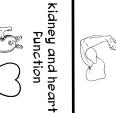


helps keep energy

levels steady

cholesterol levels

may help lower





may help lower risk

of heart disease

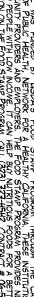
and cancer











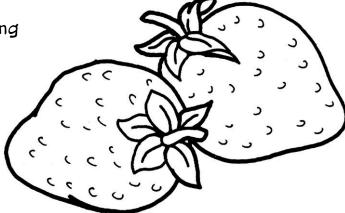


# HOW TO PICK SOME STUNNING ONES.

What are the characteristics you should look for when selecting strawberries at the market? Praw two Bubble Maps®: One labeled "Characteristics you PO WANT in a stunning strawberry," and the other labeled, "Characteristics you PON'T WANT want in a stunning strawberry," Assign the descriptors below to the correct Bubble Map®

- plump
- dry
- Firm
- uniform color
- rich red color
- pale red color
- greenish, white color
- Fresh leafy caps
- green leaves
- brown leaves
- dry leafy caps
- soft
- mushy-looking
- bruised

- moldy
- smashed
- shiny
- dull
- clean
- Fruity aroma
- sour aroma
- bright
- wet
- shriveled

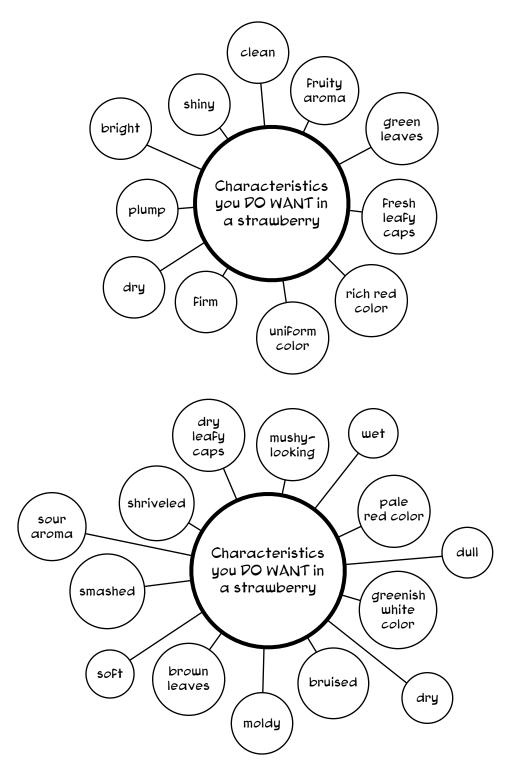




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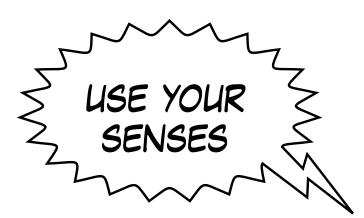
WHINNING STRINISERRIES!

## BUBBLE MAP®: HOW TO PICK SOME STUNNING ONES.









#### STRAWBERRIES

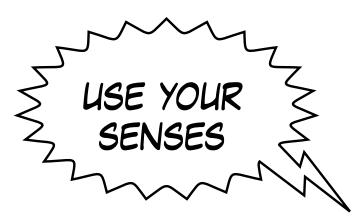
LONG-STEMMED STRAWBERRIES

	Color		
	Size		
	Shape		
	Other		
	Sound		
	Texture		
	Taste	TASTE:	TASTE:
		TEXTURE:	TEXTURE:
	Smell		









#### STRAWBERRIES

#### LONG-STEMMED STRAWBERRIES

	Color	red to dark red	same
	Size	approx. 2" depending on the berry	larger than the regular strawberries
	Shape	can be round, cone, heart- shaped, or even square depending on the berry	same
	Other	shiny, seedy	same, but have a long stem still attached
	Sound	a soft squish when bitten; juicy	same
	? Texture	slick, yet slightly bumpy skin; soft, yields to gentle pressure	same
	Taste	TASTE: sweet, sometimes tart/ sour TEXTURE: soft, seedy, gritty, moist, succulent (juicy)	same
(2)	Smell	Fruity, sweet, aromatic	same

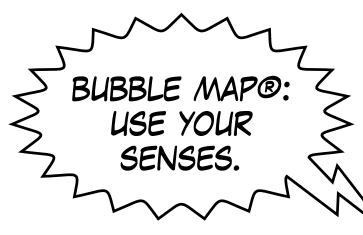
**EXTENSIONS:** 1.) Utilize the following Bubble Map® activity provided to graphically organize the sensory attributes of strawberries.

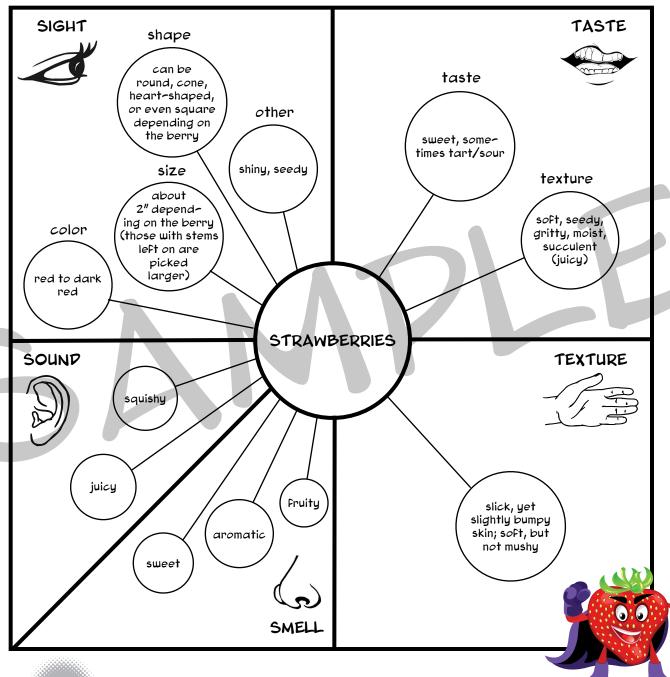
2.) Check out the enclosed "How To Pick Some Stunning Ones" activity to learn about characteristics to observe For proper selection.











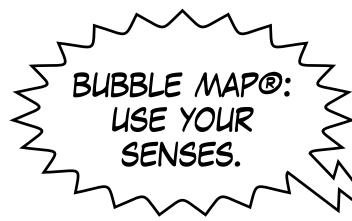


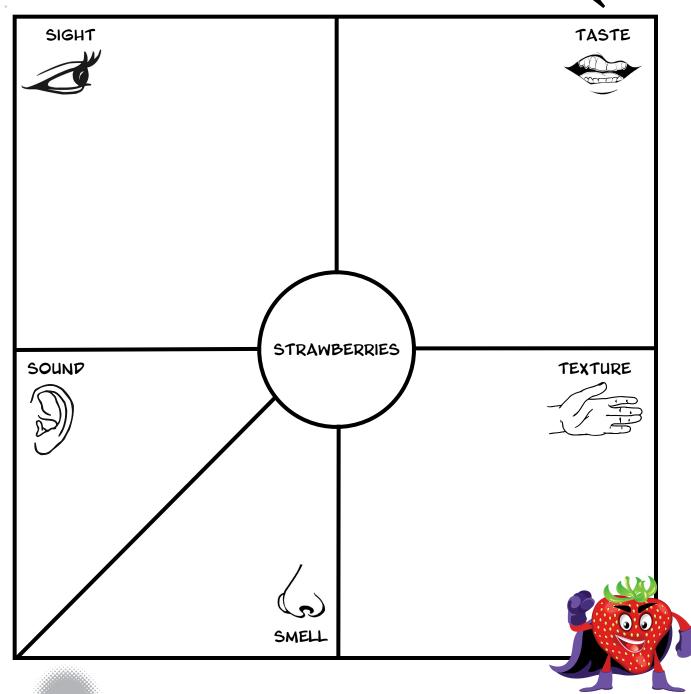
**EXTENSION:** Use the adjectives written to construct sentences describing strawberries using similes or metaphors.

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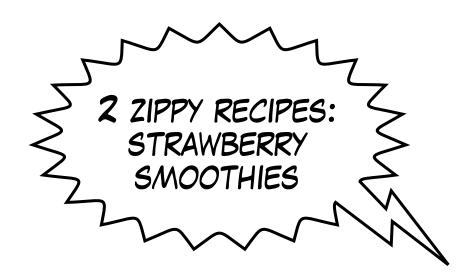


**EXTENSION:** Use the adjectives written to construct sentences describing strawberries using similes or metaphors.









#### "STRAWBERRY SHAKE IT UP!"

Serves: 2-4 in small cups

Materials

blender measuring cup measuring cup for liquids small cups for serving paper towels/napkins tablecloth

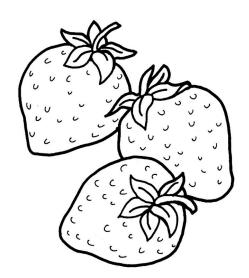
Ingredients

strawberries bananas orange juice

#### **Directions**

- . Combine the ingredients into the blender: 1 cup of ice, 1 cup of stramberries, 1 banana, 6 oz. of orange juice.
- Blend until smooth
- Pour and enjoy!

Adapted From LA Collaborative website, HOTM educational resources For strawberries, "Rebus (Pictorial) Recipes"



#### "SPRING SMOOTHIE"

Serves: class of 32 in small cups

#### Materials

blender small cups for serving pitcher or cup to pour out

smoothie paper towels/napkins tablecloth

#### Ingredients

3 (8 oz.) containers low-fat uogurt

2 (12 oz.) packages of frozen strawberries, partially thawed

1 1/2 cups 100% orange juice

#### **Directions**

- Combine half of the ingredients in a blender to make the First batch. Blend 15 to 20 seconds or until smooth.
- Repeat previous step for second batch.
- Pour and enjoy!

Source: Monrovia USP - Network for a Healthy California; adapted from Discover the Secrets of Healthy Living, Public health Institute, 2001



